



## **Reel E-Z Portable Pumping System With Redi-Flow Variable Frequency Drive**



Three components make up the pumping system. The pump itself is a Grundfos Redi-Flo 2 model. This 220 VAC stainless-steel submersible pump will fit inside 2-inch well casing<sup>1</sup> and can pump against a maximum of about 200 feet of head. At zero head, the pump rate peaks at of 9 gpm. The pump discharges through 150-feet of Happy Hose®—1/2-inch ID PVC tubing, electrical leads, and suspension cable bonded into a single unit (tubing volume is 1.6 gal). That hose is carried on the third system component, the manually operated reel with its locking pin, electrical connections, and protective roller. A Redi-Flo variable frequency drive (VFD) supplies 3-phase 220 volts to the pump. Input to the VFD is normally 120 VAC from household supply or from a generator (recommended minimal generator size for optimal pump performance: 4,000 watts at 115/230 VAC, single phase with voltage regulation). The VFD allows the Redi-Flo 2 to pump at various rates, down to 100 mL per minute.

### **Uses:**

Purge wells and collect water sample with a low-flow method.

### **Maintenance:**

Depending on the field use, the pumping system requires different levels of decontamination between sampling stations. Final decontamination at the end of the sampling event can be achieved by washing off the Happy Hose® and pumping a solution of Alconox detergent and warm water followed by thorough rinsing with distilled/deionized water. The motor fluid (deionized water) in the Grundfos pump should be drained and replaced before and after each sampling event.

### **Check out Contact information:**

This pumping system is available from the Technical Services Branch of the Mid-Continent Region. Contact **Brian Hicks** at **618-463-6463 ext. 5121** or **bhicks@osmre.gov**.

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<sup>1</sup> Operating the pump in wells of greater than 2-inch diameter requires the use of the cooling shroud (supplied on request).